ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 1 2010-11-11 14:40:56

features of your new air conditioner

- **Cool Summer Offer**

  On those hot sweltering summer days and long restless nights, there is no better escape from the heat than the cool comforts of home. Your new air conditioner brings an end to exhausting hot summer days and lets you rest. This summer, beat the heat with your own air conditioner.

- **Cost Efficient System**

  Your new air conditioner not only provides maximum cooling power in the summer, but can also be an efficient heating method in the winter with the advanced “Heat pump” system. This technology is up to 300% more efficient than electrical heating, so you can further reduce its running cost. Now, meet year-round needs with one air conditioner.

- **A Look for Everywhere**

  The elegant and harmonious design gives priority to the esthetics of your space and complements any of your existing interior décor. With its soft color and rounded-edge shape, the new air conditioner adds class to any room. Enjoy what your air conditioner offers both functionally and esthetically.

- **mpi**zone

  mpizone function generates hydrogen(H) and oxygen(O_2) to attack undesirable air contaminants such as bacteria, pollen, and odor. It makes you breathe better as if you were staying around waterfalls, ocean surf, rivers and mountains.

- **good’sleep function**

  good’sleep mode allows you to set a comfortable sleep temperature while saving energy and having sound sleep.

SAMSUNG

For easy future reference write the model and serial number down. You will find your model number on the bottom of the air conditioner.

Model #_____
Serial #_____

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 2 2010-11-11 14:40:56

safety information

To prevent electric shock, disconnect the power before servicing, cleaning, and installing the unit.

SAFETY INFORMATION

Before using your new air conditioner, please read this manual thoroughly to ensure that you know how to safely and efficiently operate the extensive features and functions of your new appliance.

Because the following operating instructions cover various models, the characteristics of your air conditioner may differ slightly from those described in this manual. If you have questions, call your nearest contact center or find help and information online at www.samsung.com.

What the icons and signs in this user manual mean:

WARNING	Risk of death or serious personal injury.
CAUTION	Potential risk of personal injury or material damage.
CAUTION	To reduce the risk of fire, explosion, electric shock, or personal injury when using your air conditioner, follow these basic safety instructions:

	Do NOT attempt.
	Do NOT disassemble.
	Do NOT touch.
	Follow directions carefully.
	Unplug the power plug from the wall socket.
	Make sure the machine is grounded to prevent electric shock.
	Call the contact center for help.
	Recommended instructions or useful information for use.

These warning signs are here to prevent injury to you and others.
Please follow them carefully.
After reading this section, keep it in a safe place for future reference.

WARNING SEVERE WARNING SIGNS

Do not place the air conditioner near hazardous substances or equipment that releases free flames to avoid fire, explosions or injuries.

- Potential risk of fire hazard or explosion.

Do not block or place items in front of the air conditioner. Do not step, hang onto, or place heavy items on the air conditioner.

- Potential risk of personal injury.

Do not install the outdoor unit at an unstable place or elevated surface where there is potential risk of falling.

- If the outdoor unit falls, it may cause personal injury or loss or property.

Any changes or modifications performed not following by the installation manual, failure or damage may occur on the condition. In this case, user will be responsible for all the repair expenses.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 3 2010-11-11 14:40:57

safety information

SEVERE WARNING SIGNS

If any gas or impurities other than R410A refrigerant come into the refrigerant pipe, serious problem may occur and it may cause injury.

Do not spray flammable gases such as insecticide near the air conditioner.
- Potential risk of electric shock, fire or unit malfunction.

Do not insert anything such as fingers or branches into the air conditioner vents.
- Keep children away from the air conditioner. Potential risk of personal injury.

Do not cut the power plug and connect to a different power cable.

Never attempt to lengthen the power cable.
- Potential risk of fire or electric shock.

Do not yank the power cable and touch the power plug with hands.
- Potential risk of fire or electric shock.

Never use a damaged power plug, power cable, or loosened power receptacle.
- Potential risk of fire or electric shock.

The electric work must be done by qualified service technician in accordance with the national wiring regulations with rated cables.
- If the capacity of the power cable is insufficient or electric work have not done properly, electric shock or fire may occur.

You should connect the power cable into the power cable terminal and fasten it with a clamp.

Do not connect the air conditioner with heating apparatus or attempt to disassemble, remodel or repair it by yourself.
- Potential risk of malfunction, electric shock or fire. If repairs are needed, consult the contact center.

Consult the place of purchase or a contact center to disassemble or reinstall the air conditioner.
- Potential risk of unit malfunction, water leakage, electric shock, or fire.

Consult the place of purchase or contact center to install the air conditioner.
- Improper installation carries a risk of unit malfunction, water leakage, electric shock or fire.
- If installing in specialty areas, such as a factory complex or saline coastal area, consult the place of purchase or contact center for specific installation details.

Install the air conditioner with the support bracket securely fastened to use for an extended period of time.
- If the air conditioner falls, it may cause personal injury or loss of property.

If the indoor unit gets wet, turn the power off immediately and call your nearest contact center.
- Potential risk of fire or electric shock.

Install an exclusive circuit breaker and short-circuit breaker for the air conditioner.
- Potential risk of electric shock or fire.

If the power cable is damaged, the manufacturer or a qualified service technician must replace it.

Always make sure that the power supply is compliant with current safety standards. Always install the air conditioner in compliance with current local safety standards.

Verify that the voltage and frequency of the power supply comply with the specifications and that the installed power is sufficient to ensure the operation of any other domestic appliance connected to the same electric lines.

The air conditioner must be installed in accordance with national wiring regulations and safety regulations wherever applicable.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 4 2010-11-11 14:40:57

Install the supplied cables firmly. Fix them securely so that external force is not exerted to the terminal block.

- If the connection is loose, heat may generate and cause electric shock or fire.

Use a rated circuit breaker only.

- Never use steel wires or copper wires as a circuit breaker. It may cause fire or unit malfunction.

Use an exclusive power source for the air conditioner.

- Potential risk of electric shock or fire.

Do not put undue stress or place heavy object on the power cable.

Do not bend the power cable excessively.

- Potential risk of fire or electric shock.

Always verify that electric connections (cable entry, section of leads, protections...) are compliant with the electric specifications and with the instructions provided in the wiring scheme.
Always verify that all connections comply with the standards applicable to the installation of air conditioners.

Use a receptacle that has a ground terminal. The receptacle must be used exclusively for the air conditioner.

- Improper electrical grounding may cause electric shock or fire.

Be sure to ground the unit. Do not connect the ground wire to gas or water pipes, lighting rods, or telephone grounding lines.

- If the unit is not properly grounded, electric shock may result.

Always verify that a suitable grounding connection is available.

Disconnect the air conditioner from power supply before it is repaired or disassembled.

CAUTION SIGNS

Connect the refrigerant tubes first then the electrical lines, when installing the unit.

Always disassemble the electric lines before the refrigerant tubes.

Verify that the air conditioner is connected to the power supply in accordance with the instructions provided in the wiring diagram included in the manual.

The manufacturer shall not be responsible for damage originating from unauthorized changes or the improper connection of electric and hydraulic lines.
Failure to comply with these instructions or to comply with the requirements set forth in the "Operating limits" table, included in the manual, and shall immediately invalidate the warranty.

Ensure no water gets into the air conditioner.

- Potential risk or electric shock.

Turn off the air conditioner using the provided remote control or control accessory (if provided). Do not unplug to turn off the unit (unless there is an immediate danger).

Do not open the front grille during operation.

- Potential risk of electric shock or unit malfunction.

Cool air should not flow directly towards people, pets, and plants.

- It is harmful to your health, pets, and plants.

Do not run the air conditioner for an extended period of time in a room with the door closed or with babies, elderly or disabled people.

- Open the door or windows to ventilate your room at least once an hour to prevent oxygen shortage.

Do not drink drain water coming out of the air conditioner.

- Potential risk of health hazard.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 5 2010-11-11 14:40:57

safety information

CAUTION SIGNS

Do not expose the dust filter to direct sunlight while drying.
- Strong direct sunlight may deform the dust filter.

Do not allow children to climb on the air conditioner.

Use only rated accessories and install the air conditioner with rated equipments.
- If you do not use the rated accessories, the air conditioner may drop from its place, water may leak or electric shock or fire may occur.

Do not use the air conditioner as a cooling precision instrument for food, pets, plants, cosmetics or machinery.

Do not give excessive shock to the air conditioner.
- Potential risk of fire or unit malfunction.

Do not spray water directly on the air conditioner or use benzene, thinner or alcohol to clean the surface of the unit.
- Potential risk of electric shock or fire.
- Potential risk of damage to the air conditioner.

Do not place any objects, especially containers with liquid.

Do not touch the pipe connected to the air conditioner.

This appliance should be installed according to the provided installation manual.

Install the shortest possible length of pipe.
- If the length of pipe gets unnecessarily long, the life of air conditioner can be shorten and become inefficient.

Install the power cable and communication cable of the indoor and outdoor unit at least 1m away from the electric appliance.

Install the indoor unit away from lighting apparatus using the ballast.
- If you use the wireless remote control, reception error may occur due to the ballast of the lighting apparatus.

For maximum safety, installers should always carefully read the following warnings.

Do not install the air conditioner in following places.
- Place where there is mineral oil or arsenic acid.
- Resin parts flame and the accessories may drop or water may leak. The capacity of the heat exchanger may reduce or the air conditioner may be out of order.
- The place where corrosive gas such as sulfurous acid gas generates from the vent pipe or air outlet.
- The copper pipe or connection pipe may corrode and refrigerant may leak.
- The place where there is a machine that generates electromagnetic waves. The air conditioner may not operate normally due to control system.
- The place where there is a danger of existing combustible gas, carbon fiber of flammable dust.
- The place where thinner or gasoline is handled Gas may leak and it may cause fire.

If the air conditioner is installed in a small room, measures must be taken to prevent the refrigerant concentration in the room from exceeding the safety limit in the event of refrigerant leakage.
Consult a dealer regarding the appropriate measures to prevent the allowable concentration from being exceeded.
- If the refrigerant leaks, and cause the concentration limit to be exceeded, hazards due to lack of oxygen in the room may result.

Install the air conditioner away from direct exposure to sunlight, heating apparatus, and humid places.
- Hang curtains on windows to boost cooling efficiency and to avoid the risk of electric shock.

The air conditioner is composed of moving parts. Keep children away from the unit to avoid physical injury.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 6 2010-11-11 14:40:57

Check for damage on delivery. If damaged, do not install the air conditioner and call the place of purchase immediately.

Insert the dust filter before operating the air conditioner.

- If there is no dust filter inside the air conditioner, accumulated dust may shorten the life of the air conditioner and cause electricity waste.

Keep indoor temperatures stable and not extremely cold, especially where there are children, elderly or disabled people.

Clean the dust filter every 2 weeks. Clean the filter more frequently if the air conditioner is operated in dusty areas.

The packaging material and used batteries of the remote controller (optional) must be disposed of in accordance with the national standards.

The refrigerant used in the air conditioner must be treated as chemical waste. Dispose the refrigerant following national standards.

Have a qualified service technician install the air conditioner and perform a trial operation.

Firmly connect the drain hose to the air conditioner for proper water drainage.

Install the outdoor unit where operating noise and vibration will not disturb your neighbor and in a well-ventilated area with no obstacle.

- Potential risk of malfunction.
- Operating noise may disturb your neighbor.

Make sure that children take precautions against access to the air conditioner and they do not play with the unit.

When using a wireless remote control, the distance should not be more than 7 meters from the air conditioner.

If the remote control is not used for a long period of time, remove the batteries to prevent leakage of electrolyte.

When cleaning the outdoor unit, touch the heat exchanger radiator fins with extreme care.

- Wearing thick gloves can protect your hands.

Make sure that the condensed water dripping from the drain hose runs out properly and safely.

Store the operation and installation manual in a safe location and remember to hand it over to the new owner if the air conditioner is sold or transferred.

All the materials used for the manufacture and packaging of the air conditioner are recyclable.

After completing the installation, always carry out a functional test and provide the instructions on how to operate the air conditioner to the user.

The appliance is not intended for use by young children or infirm persons without supervision: Young children should be supervised to ensure that they do not play with the appliance.

Clean the air conditioner after the inner fan stops operating.

- Potential risk of injury or electric shock.

Inspect the condition, electric connections, pipes and external case of the air conditioner regularly by a qualified service technician.

Do not open doors and windows in the room being cooled during operation unless necessary.

Do not block the air conditioner vents. If objects block the air flow, it may cause unit malfunction or poor performance.

Make sure there are no obstacles under the indoor unit.

- Potential risk of fire or loss of property.

Make sure that there are no obstacles or covers that block the air conditioner. Allow sufficient space for air circulation.

- Insufficient ventilation may result in poor performance.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 7 2010-11-11 14:40:58

safety information

CAUTION SIGNS

Make sure the voltage and frequency of the electric system are compatible with the air conditioner.

If a power outage occurs while the air conditioner is working, turn off the power source immediately.

Max current is measured according to IEC standard for safety and current is measured according to ISO standard for energy efficiency.

The unit must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.

After connecting the power cable between the indoor/outdoor unit, attach the cover of component box securely and make sure it is not loose.

For the power cable, use the grade of H07RN-F or H05RN-F materials.

The unbalanced power must be maintained within 10% of supply rating among whole indoor units.

If the power is unbalanced greatly, it may shorten the life of the condenser.
If the unbalanced power is exceeded over 10% of supply rating, the indoor unit is protected, stopped and the error mode indicates.

To protect the product from water and possible shock, you should keep the power cable and the connection cord of the indoor and outdoor units in the protection tube.

Connect the power cable to the auxiliary circuit breaker.

You must keep the cable in a protection tube.

Keep distances of 50mm or more between power cable and communication cable.

Maximum length of power cable is decided within 10% of power drop. If it exceeds, you must consider another power supplying method.

The circuit breaker (MCCB, ELB) should be considered more capacity, if many indoor units are connected from one breaker.

Use solderless ring terminal to connect the power cable to the power terminal block.

Use an appropriate screwdriver for tightening the terminal screws.

Over-tightening the terminal screws may break them.

Ensure the off-on and protection switches are properly installed.

Do not use the air conditioner if damaged. If problems occur, immediately stop operation and disconnect the plug from the power supply.

If the air conditioner will not be used for an extended period of time (for example, over several months), unplug the power from the wall.

Call the place of purchase or a contact center if repairs are needed.

- Potential risk of fire or electric shock if disassembly or repairs are attempted by a non-qualified service technician.

If you smell burning plastic, hear strange sounds, or see smoke coming from the unit, unplug the air conditioner immediately and call a contact center.

- Potential risk of fire or electric shock.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 8 2010-11-11 14:40:58

contents

VIEWING YOUR AIR CONDITIONER 10

10 Checking the indoor unit and digital display
10 Main parts
10 Indoor unit digital display
11 Removing the front panel
11 Power button and Room temperature sensor
12 Checking the remote control
13 Remote control display
13 Using the remote control
13 Installing the batteries

OPERATING BASIC FUNCTION 14

14 Turning the air conditioner on and off
14 Selecting operation mode
14 Auto
15 Cool
16 Dry
17 Fan
18 Heat
19 Adjusting the air flow direction
19 Vertical air flow
19 Horizontal air flow

USING ADVANCED FUNCTIONS 20

20 Using the Turbo function
21 Setting timer
21 On timer
22 Off timer
23 Combining On timer and Off timer
24 **good'sleep** mode
26 Using the mpi zone function
27 Using the Energy saving function
28 Using the Evaporator clean function

CLEANING AND MAINTAINING THE AIR CONDITIONER 29

29 Cleaning the exterior
29 Cleaning the filter
29 Air filter
30 Anti-allergy filter
31 Replacing the filter
31 Deodorizing filter
32 Maintaining your air conditioner
32 Periodical checks
33 Internal protections via the unit control system

APPENDIX 34

34 Troubleshooting
35 Operation ranges

ENGLISH

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 9 2010-11-11 14:40:58

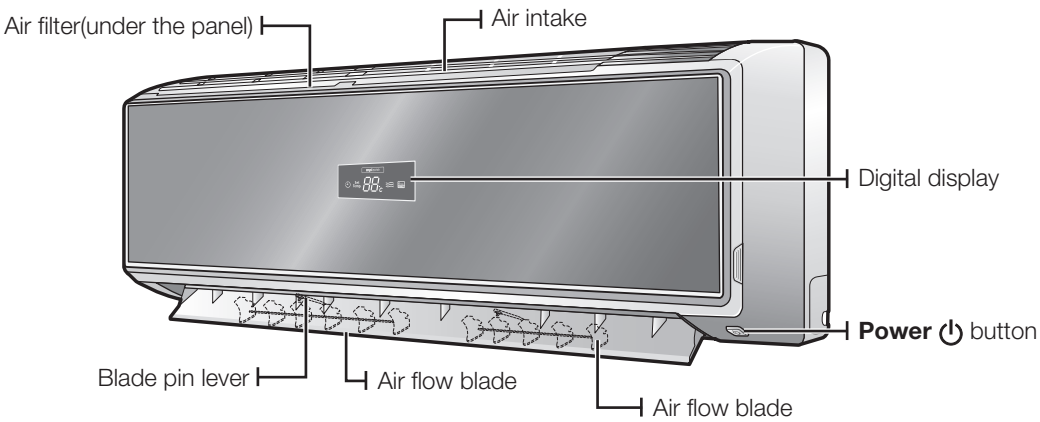
viewing your air conditioner

Congratulations on the purchase of the air conditioner. We hope you enjoy the features of your air conditioner and stay cool or warm with optimal efficiency.
Please read the user manual to get started and to make the best use of the air conditioner.

CHECKING THE INDOOR UNIT AND DIGITAL DISPLAY

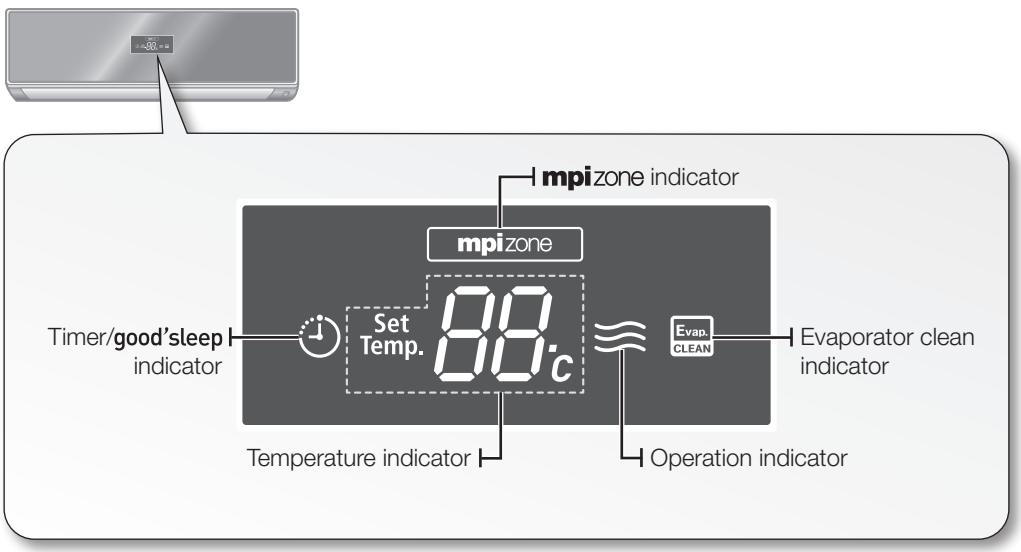
Carefully unpack your air conditioner, and check the unit to make sure it is not damaged.

Main parts



Your air conditioner may slightly look different from illustration shown above depending on your model.

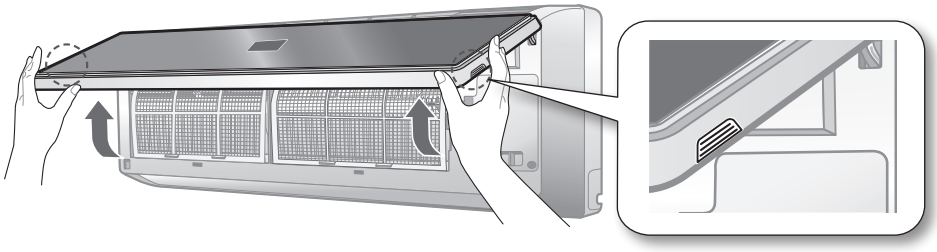
Indoor unit digital display



ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 10 2010-11-11 14:40:59

OPENING THE FRONT PANEL

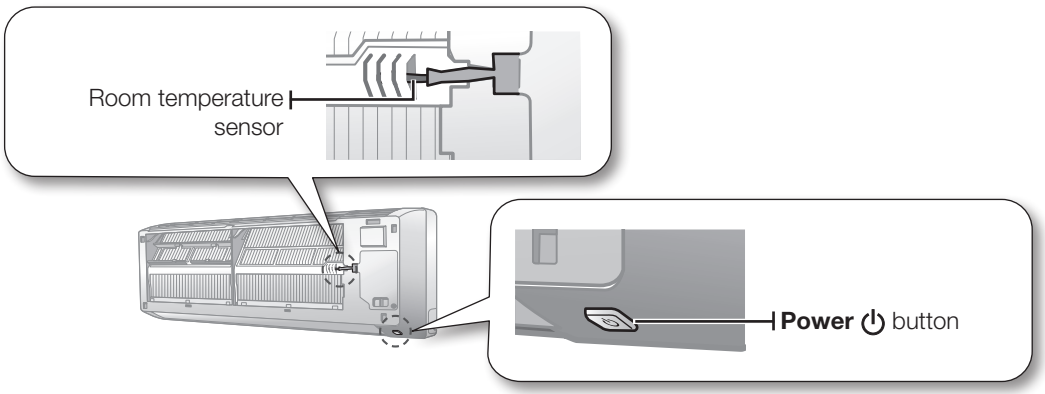
Tightly grab the grooved surface on both side of the front panel and lift the bottom side of the panel up until it gets locked in one position.



Power button and Room temperature sensor

You may locate the **Power** ⏻ button on the right bottom side of the air conditioner. If the front panel is open, you can check the room temperature sensor.

You can turn on the air conditioner without the remote control by pressing the **Power** ⏻ button. The room temperature sensor measures indoor room temperature.



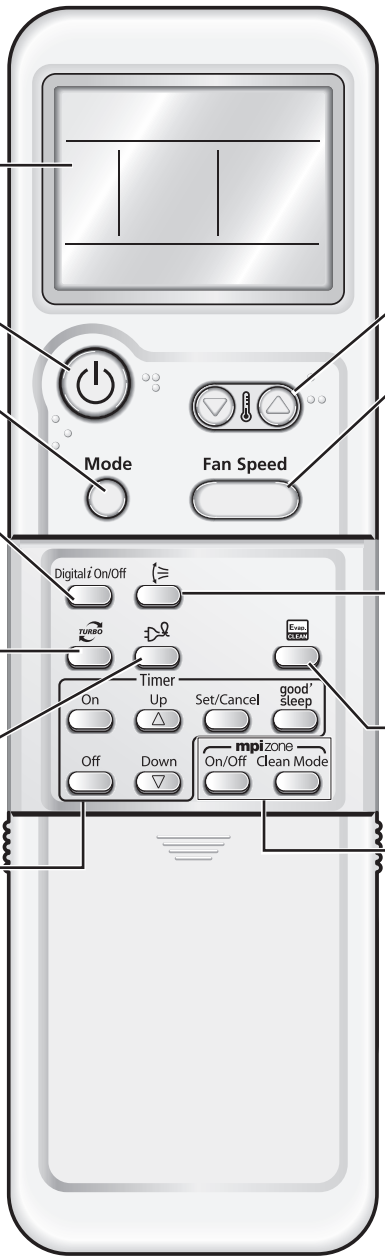
Front panel of your air conditioner is actually not detachable.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 11 2010-11-11 14:41:00

viewing your air conditioner

CHECKING THE REMOTE CONTROL

You can activate the air conditioner by pointing the remote control away from it. When using the remote control, always point it directly at the air conditioner.



Remote control display

Power ⏻
Turn on/off the air conditioner.

Mode
Set one of the 5 operating modes. (See pages 14~18 for instructions.)

Digital *i* On/Off
Set to turn on/off the digital display of the unit during operation. Operating mode indicator still remains on.

Turbo TURBO
Operate in maximum fan speed to cool/warm quickly.

Energy saving function
Less energy usage makes your space cool between the temperature range of 26℃~30℃.

Timer function

On/Off
Set the timer on/off.

Up/Down
Increase/Decrease the time.

Set/Cancel
Set/Cancel the current timer/**good' sleep** mode setting.

good' sleep
Set the **good' sleep** mode on/off.

Temperature ▼ ▲
Decrease/Increase the temperature by 1℃.

Fan speed
Adjust how much air flows through the air conditioner with the 4 different fan speeds such as Auto/Low/Medium/High.

Air swing
Activate/Deactivate air flow blade movement automatically up and down.

Evap. CLEAN EVAPO CLEAN
Evaporator clean function - Dry inside of the indoor unit to get rid of odor.

mpi zone function

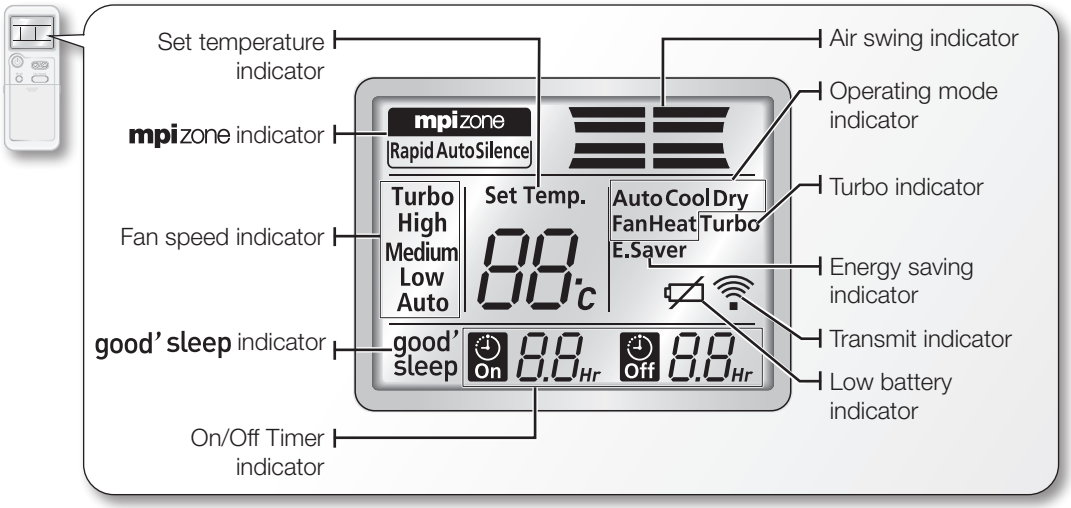
On/Off
Emit hydrogen(H) and oxygen(O_2) in the air to remove polluted substances such harmful particles.

Clean Mode
Set one of the 3 **mpi** zone operating types.

Each time you press the button, a short beep will sound and a transmit indicator appears on the remote control display.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 12 2010-11-11 14:41:02

Remote control display

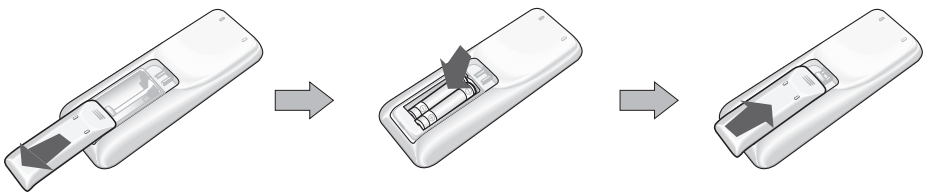


Using the remote control

- Point the remote control towards the remote control sensor of the unit.
- When properly pressing the button on the remote control, you will hear beep sound from the unit.

- The signal may not be received well of electronic lighting style fluorescent lamps, such as inverter fluorescent lamps are in the same space.
- If other electrical products operate by the remote control, call your nearest contact center.

Installing the batteries



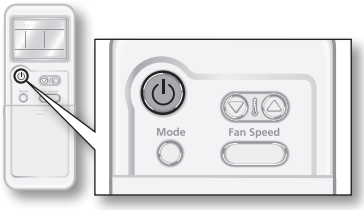
1. **Slide the cover, on the rear side of the remote control, down to open.**
2. **Install two AAA batteries.**
   Check and match the "+" and "-" signs accordingly. Make sure you have installed the batteries in correct position.
3. **Close the cover by sliding it back to its original position.**
   You should hear click sound when the cover is locked properly.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 13 2010-11-11 14:41:04

operating basic function

TURNING THE AIR CONDITIONER ON AND OFF

Press the **Power** ⏻ button on the remote control.



You will hear a ringing sound and the air flow blade will move up and down automatically when the air conditioner is properly on.
The air conditioner will operate in the most recent operation mode used or Auto mode.

When you turn off the air conditioner, air flow blade will stop moving and remain closed.

Turning on/off your air conditioner without the remote control.

You can operate your air conditioner by pressing the **Power** ⏻ button on the right bottom side of the air conditioner.

SELECTING OPERATION MODE

Auto

In Auto mode, the air conditioner will automatically set the temperature and fan speed depending on the room temperature detected by the room temperature sensor.

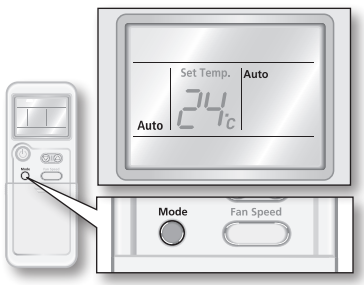
1. Turn on the air conditioner.

   Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

   Press the **Mode** button on the remote control until Auto mode and Auto fan speed indicator appear on the remote control display.

   The air conditioner will automatically set the operation mode to Cool or Heat depends on the room temperature.

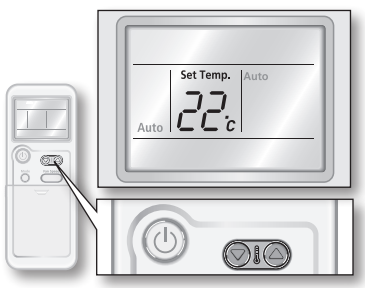


When you press the **Mode** button, mode will change in order of Auto, Cool, Dry, Fan and Heat.

3. Set the Temperature.

   Press the **Temperature** ▼ or ▲ button on the remote control to decrease or increase the desired temperature.

   You can set the desired temperature between the range of 16℃~30℃.



You can decrease/increase the temperature by 1℃.

- When the air conditioner is already operating in another mode, press the **Mode** button until Auto mode indicator appears on the remote control display.
- When you are using the remote control, make sure correct indicator which matches your selection appears on the remote control display.
- Air flow can be adjusted manually.(See page 19 for instructions.)

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 14 2010-11-11 14:41:09

Cool

In Cool mode, the air conditioner will cool your room. You can adjust the temperature and the fan speed to feel cooler in hot season.

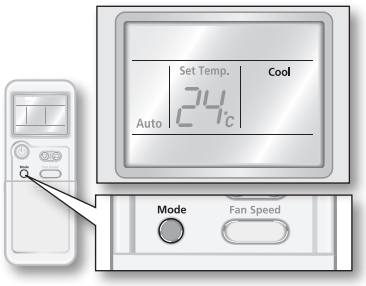
1. Turn on the air conditioner.

Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

Press the **Mode** button on the remote control until Cool mode indicator appears on the remote control display.

The air conditioner operates in Cool mode and it will lower the temperature in your room.

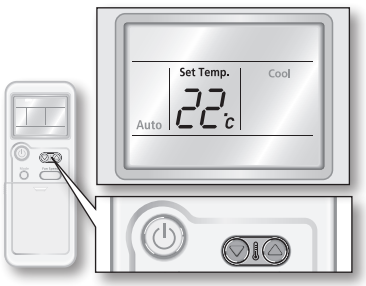


When you press the **Mode** button, mode will change in order of Auto, Cool, Dry, Fan and Heat.

3. Set the temperature.

Press the **Temperature** ▼ or ▲ button on the remote control to decrease or increase the desired temperature.

You can set the desired temperature between the range of 16℃~30℃.

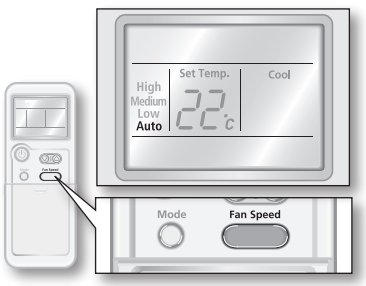


You can decrease/increase the temperature by 1℃.

4. Set the fan speed.

Press the **Fan Speed** button on the remote control to set the desired fan speed.

If room temperature reaches desired value, the air conditioner will shut off cooling for a while and just the fan runs.



When you press the **Fan Speed** button, fan speed will change in order of Auto, Low, Medium and High.

- When you are using the remote control, make sure correct indicator which matches your selection appears on the remote control display.
- Air flow can be adjusted manually.(See page 19 for instructions.)
- If current outside temperatures are much higher than the selected indoor temperature, it may take time to bring the inner temperature to the desired coolness.

ENGLISH

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 15 2010-11-11 14:41:15

SELECTING OPERATION MODE

Dry

The air conditioner in Dry mode acts like a dehumidifier by removing moisture from the indoor air. Dry mode makes the air feel refreshing in a humid climate.

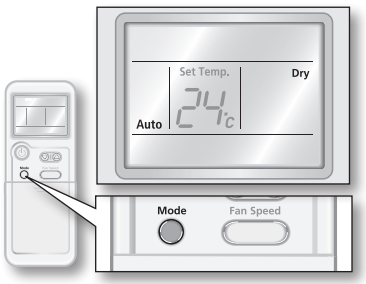
1. Turn on the air conditioner.

Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

Press the **Mode** button on the remote control until Dry mode indicator appears on the remote control display.

The air conditioner operates in Dry mode and automatically adjusts the fan speed to Auto.

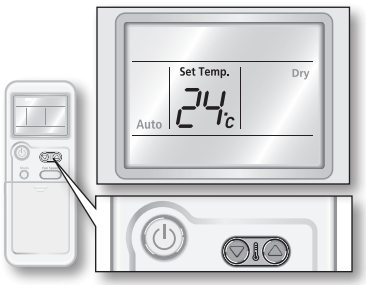


When you press the **Mode** button, mode will change in order of Auto, Cool, Dry, Fan and Heat.

3. Set the temperature.

Press the **Temperature** ▼ or ▲ button on the remote control to decrease or increase the desired temperature.

You can set the desired temperature between the range of 18℃~30℃.



You can decrease/increase the temperature by 1℃.

- When you are using the remote control, make sure correct indicator which matches your selection appears on the remote control display.
- Air flow can be adjusted manually.(See page 19 for instructions.)

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 16 2010-11-11 14:41:19

Fan

Fan mode can be selected to ventilate your room. Fan mode will be helpful to refresh the stale air in your room.

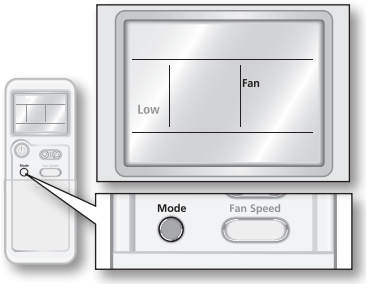
1. Turn on the air conditioner.

Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

Press the **Mode** button on the remote control until Fan mode indicator appears on the remote control display.

The air conditioner operates in Fan mode and automatically adjusts the temperature according to the current room temperature.

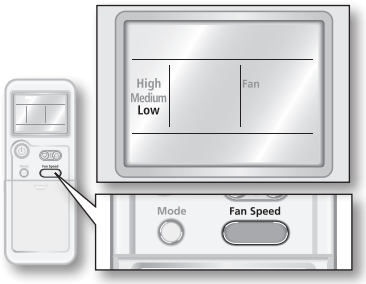


When you press the **Mode** button, mode will change in order of Auto, Cool, Dry, Fan and Heat.

---

3. Set the fan speed.

Press the **Fan Speed** button on the remote control to set the desired fan speed.



When you press the **Fan Speed** button, fan speed will change in order of Low, Medium and High.

- When you are using the remote control, make sure correct indicator which matches your selection appears on the remote control display.
- Air flow can be adjusted manually.(See page 19 for instructions.)

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 17 2010-11-11 14:41:22

SELECTING OPERATION MODE

Heat

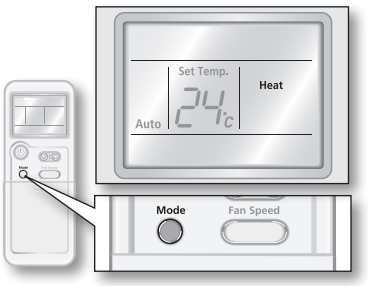
The air conditioner heats as well as cools. Warm your room with this versatile appliance in the cold of winter.

1. Turn on the air conditioner.

Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

Press the **Mode** button on the remote control until Heat mode indicator appears on the remote control display.
The air conditioner operates in Heat mode and warms your room.



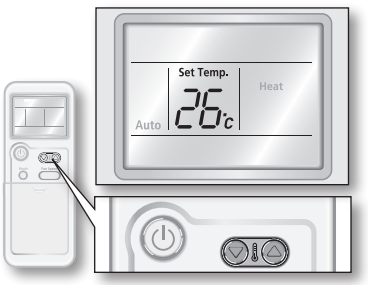
When you press the **Mode** button, mode will change in order of Auto, Cool, Dry, Fan and Heat.

---

3. Set the temperature.

Press the **Temperature** ▼ or ▲ button on the remote control to decrease or increase the desired temperature.

You can set the desired temperature between the range of 16˚C~30˚C.



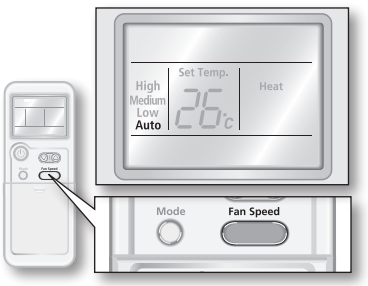
You can decrease/increase the temperature by 1˚C.

---

4. Set the fan speed.

Press the **Fan Speed** button on the remote control to set the desired fan speed.

If room temperature reaches desired value, heating will stop for a while.



- When you press the **Fan Speed** button, fan speed will change in order of Auto, Low, Medium and High.
- Fan may not operate for about 3~5 minutes at the beginning to prevent any cold blasts while the air conditioner is warming up.

- Air flow can be adjusted manually.(See page 19 for instructions.)
- Since the air conditioner heats the room by taking heat energy from outdoor air, the heating capacity may decrease when outdoor temperatures are extremely low. If you feel the air conditioner insufficiently heats, using an additional heating appliance in combination with the air conditioner is recommended.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 18 2010-11-11 14:41:28

ADJUSTING THE AIR FLOW DIRECTION

Air flow can be directed to your desired position.

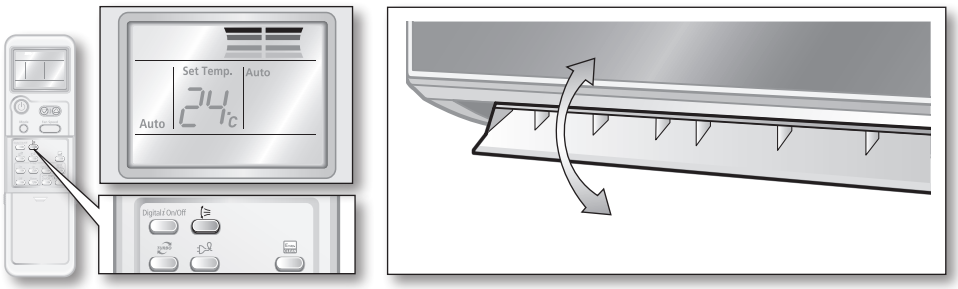
Vertical air flow

Air flow blades move up and down.

1. Press the **Air swing** button on the remote control.

   Air swing indicator will be on and the number of indicator lights move up and down.
   Air flow blades move up and down continuously to circulate the air.

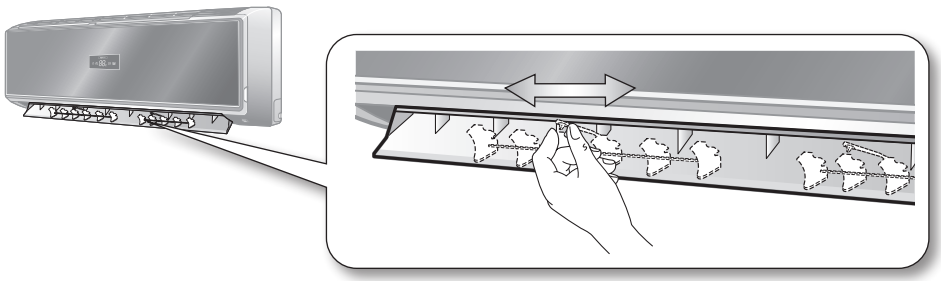
   To keep the air flow direction in a constant position, press the **Air swing** button on the remote control again.



Horizontal air flow

Make sure one of the blade pins that stick out of the air flow blades are not broken.

1. Move the blade pin lever left or right to keep the air flow direction in a constant position you prefer.



CAUTION Be extremely careful with your fingers while adjusting the Horizontal air flow direction. There is a potential risk of personal injury when the unit is mishandled.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 19 2010-11-11 14:41:30

using advanced functions

USING THE TURBO FUNCTION

Turbo function will be helpful to cool or heat your room quickly and effectively by operating at the maximum fan speed for 30 minutes.

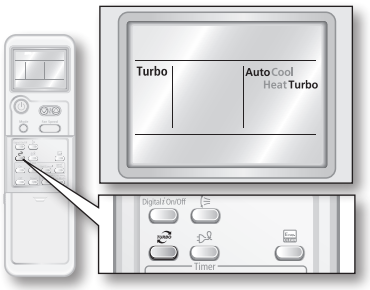
1. Turn on the air conditioner.

   Press the **Power** ⏻ button on the remote control.

2. Set the operating mode.

   Press the **Turbo** TURBO button on the remote control until Turbo indicator appears on the remote control display.

   The air conditioner operates in Turbo fan speed and automatically adjusts the temperature according to the current room temperature. The unit operates for 30 minutes and then operates in last used mode, or in Auto mode if Dry/Fan mode is most recent mode used.



Turbo function is only available in Auto/Cool/Heat mode.
If Turbo function is selected in Dry/Fan mode, operating mode changes to Auto.

To deactivate Turbo function

1. Press the **Turbo** TURBO button on the remote control again.

   The air conditioner operates in last used mode, or in Auto mode if Dry/Fan mode is most recent mode used.

- When you are using the remote control, make sure corresponding indicator appears on the remote control display.
- Temperature/Fan speed cannot be adjusted while using this function.
- Air flow can be adjusted manually.(See page 19 for instructions.)
- When the Turbo function is activated, pressing **Mode** button will automatically cancel the function.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 20 2010-11-11 14:41:33

SETTING TIMER

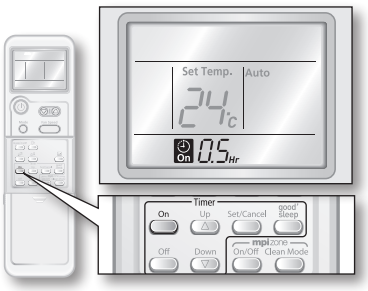
This advanced Timer function allows you to turn on/off your air conditioner automatically even when you are away. Simply set the time and your air conditioner will turn on/off automatically.

On timer

This function allows you to turn on the air conditioner automatically within the time range of 24 hours. On timer is available while your air conditioner is on/off.

1. Press the **On** button on the remote control.

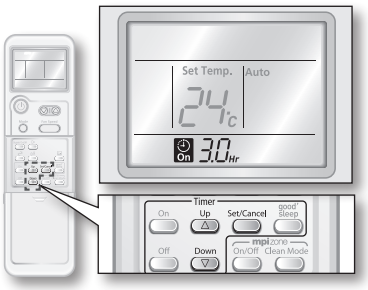
On timer indicator blinks on the remote control display.



2. Set the time you want the air conditioner to turn on automatically.

Press the **Up** or **Down** button on the remote control to change the time setting while On timer indicator is blinking. You can set the time up to 24 hours, increasing in 30 minute unit up to first 3 hours and in hourly unit after first 3 hours.

3. Press the **Set/Cancel** button on the remote control to active it on.

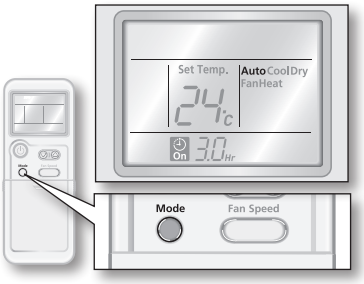


The remote control display will show the hour(s) you have set.
The air conditioner will operate automatically at set time and then On timer indicator disappears. If On timer is not set within 10 seconds, the air conditioner will end setting.

4. Set the operating mode.

Press the **Mode** button on the remote control until the desired mode appears on the remote control display.

The air conditioner will operate in the mode you set.



On timer function is available in Auto/Cool/Dry/Fan/Heat mode.

- Temperature can also be adjusted.(See step 3 on page 15 for instructions.)
- After the set up while the unit is off, approximately after 10 seconds, all the other indicators will be gone except the On timer indicator and remaining time.
- Setting time allows you to change by pressing the **On** button. Press the **Up** or **Down** button to change time setting and then press the **Set/Cancel** button to active it on.

To deactivate the On timer

1. Press the **Set/Cancel** button on the remote control.

On timer you set will be canceled and On timer indicator will disappear.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 21 2010-11-11 14:41:38

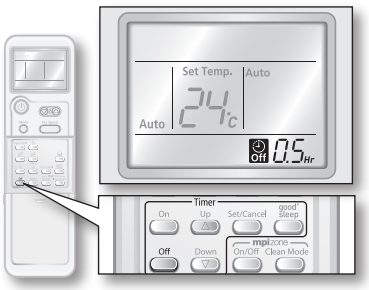
SETTING TIMER

Off timer

This function allows you to turn off the air conditioner automatically within the time range of 24 hours. Off timer is functional when the unit is operating.

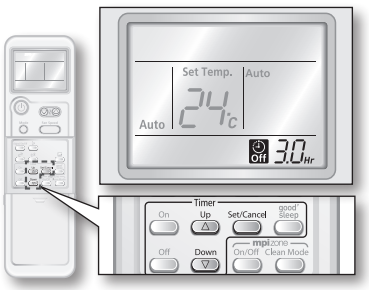
1. Press the **Off** button on the remote control.

   Off timer indicator blinks on the remote control display.



2. Set the time you want the air conditioner to turn off automatically.

   Press the **Up** or **Down** button on the remote control to change the time setting while Off timer indicator is blinking. You can set the time up to 24 hours, increasing in 30 minute unit up to first 3 hours and in hourly unit after first 3 hours.



3. Press the **Set/Cancel** button on the remote control to active it on.

   The remote control display will show the hour(s) you have set.
   The air conditioner will turn off automatically at set time and then Off timer indicator disappears. If Off timer is not set within 10 seconds, the air conditioner will end setting.

- Setting time allows you to change by pressing the **Off** button. Press the **Up** or **Down** button to change the time setting and then press the **Set/Cancel** button to active it on.
- You can combine Off timer function with On timer function to turn on and then off the air conditioner at the desired time.(See page 23 for instructions.)

To deactivate the Off timer

1. Press the **Set/Cancel** button on the remote control.

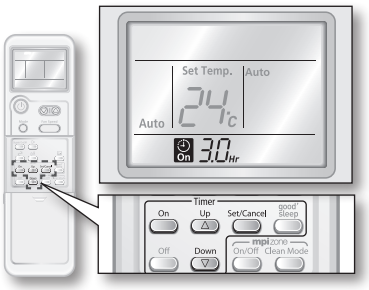
   Off timer you set will be canceled and Off timer indicator will disappear.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 22 2010-11-11 14:41:41

Combining On timer and Off timer

You can combine the On timer and Off timer together for more convenient use of the timer function.

1. Set the On timer.
Press the **On** button.
Set the time with **Up** and **Down** button.
Press **Set/Cancel** button to activate the On timer.



See page 21 for more detail instructions on setting On timer.

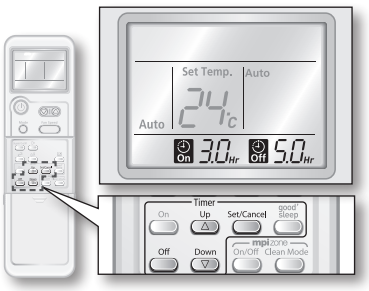
2. Set the Off timer.
Press the **Off** button.
Set the time with **Up** and **Down** button.
Press **Set/Cancel** button to activate the Off timer.

When you set the time, there can be two possible options:

On timer is shorter than Off timer

The air conditioner will turn on and then off automatically. Set up should be done while the air conditioner is off.

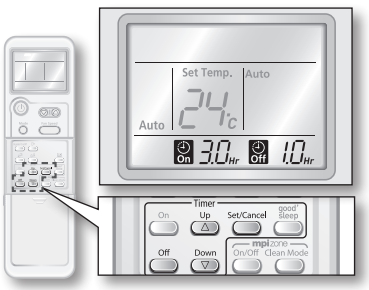
For example, If the On timer is set at 3 hours and the Off timer at 5 hours, the air conditioner will turn off automatically 3 hours after the set time and then operate for next 2 hours before turning off automatically.



On timer is longer than Off timer

The air conditioner will turn off and then on automatically. Set up should be done while the air conditioner is operating.

For example, If the On timer is set at 3 hours and the Off timer at 1 hour, the air conditioner will turn off automatically an hour after the set time and remain off for 2 hours before turning on automatically.



See page 22 for more detail instructions on setting Off timer.

To deactivate the timer combination

1. Press the **Set/Cancel** button on the remote control.

Both of the On and Off timer will be canceled and the indicators will disappear.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 23 2010-11-11 14:41:46

using advanced functions

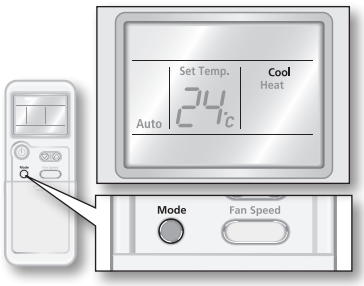
SETTING TIMER

good' sleep mode

good' sleep mode allows you to set a comfortable sleep temperature while saving energy and having sound sleep. **good' sleep** mode can be set up when the air conditioner is on.

1. Set the operating mode.

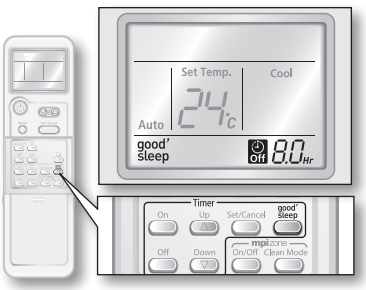
Press the **Mode** button on the remote control until Cool/ Heat appears on the remote control display.



good' sleep is only available in Cool/Heat mode.

2. Press the **good' sleep** button on the remote control.

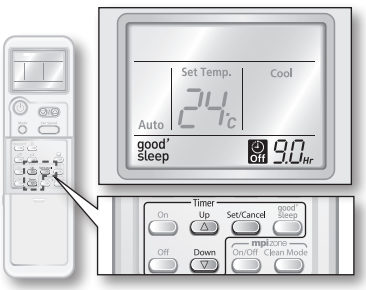
good' sleep indicator appears and Off timer indicator starts blinking on the remote control display.



3. Set the length of time you want the air conditioner to stay on.

Default **good' sleep** time is set to 8 hours. Press the **Up** or **Down** button on the remote control to change the time setting while Off timer indicator is blinking.

You can set the time up to 12 hours, increasing in 30 minute unit up to first 3 hours and in hourly unit after first 3 hours.



4. Press the **Set/Cancel** button on the remote control to active it on.

The remote control display will show the hour(s) you have set.
When the set time has elapsed, the air conditioner will automatically turn off and then **good' sleep** indicator disappears.
If **good' sleep** mode is not set within 10 seconds, the air conditioner will end setting.

- Temperature/Fan speed/Air swing can be adjusted after setting **good' sleep** in Heat mode.
- Temperature can be adjusted and the air conditioner automatically adjusts the Fan speed/Air swing after setting **good' sleep** in Cool mode.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 24 2010-11-11 14:41:51

Temperature changes in good' sleep mode

To prevent excessive cooling/heating during sleep, the **good' sleep** mode automatically modifies the temperature setting in accordance with the time setting. Temperature and air current change according to the three stages; Fall asleep, Sound sleep, and Wake up from **good' sleep** mode, and then the air conditioner will automatically turn off when the set time has elapsed.

Three stage **good' sleep** prevents you from having difficulty sleeping in summer/winter night.

① **Fall asleep** : Eases you into sleep by dropping the temperature.
② **Sound sleep** : Relaxes your body and raises your temperature slightly.
③ **Wake up from good' sleep mode** :
Allows you to wake up from comfortable intermittent air and it makes you feel refresh.

- Set Off timer in **good' sleep** mode over 5 hours. You feel disturbed sleep if the **good' sleep** is set too short or long because the default is set to 8-hour-operation.
- If the **good' sleep** mode is set less than 4 hours, the operation will stop at the set time. If the **good' sleep** mode is set over 5 hours, it will run as Wake up stage for the last one hour before stop.
- Recommended set temperature is between 25℃~27℃ for cooling and 21℃~23℃ for heating.

To deactivate good' sleep mode

1. Press the **Set/Cancel** button on the remote control.

   good' sleep mode you set will be canceled and **good' sleep** indicator will disappear.

ENGLISH

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 25 2010-11-11 14:41:52

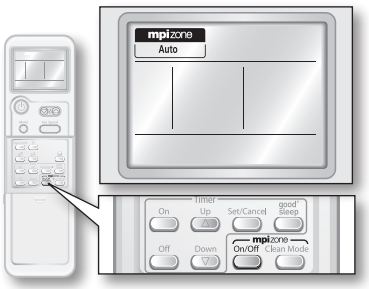
using advanced functions

USING THE **mpi**zone FUNCTION

MPI, Micro Plasma Ion, zone generates hydrogen(H) and oxygen(O_2) to remove a polluted substance and decomposition of such harmful particles. It makes you breathe better as if you were staying around waterfalls, ocean surf, rivers and mountains. **mpi**zone indicator on the indoor unit will fade in and fade out continuously when the **mpi**zone function is activated.

1. Press the **mpi**zone **On/Off** button on the remote control while the air conditioner off.
   mpizone indicator will appear on the remote control display.

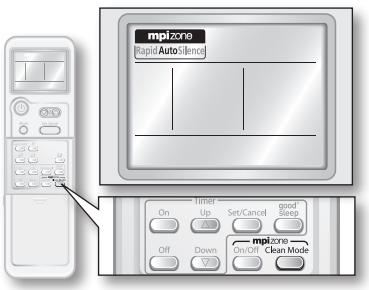
   The air conditioner generates MPI in **mpi**zone Auto mode.



2. Set the operating type.

   Each time you press the **Clean Mode** button while the air conditioner is off, the operating type will change in order of Auto, Silence and Rapid.

   Auto : adjust the fan speed automatically.
   Silence : operate at a minimum fan speed quietly.
   Rapid : operate at a maximum fan speed to clean and purifies the air effectively and quickly.



The **Clean Mode** button will not work while the air conditioner is on.

When you activate the **mpi**zone function while the air conditioner is on, **mpi**zone function automatically sets to Auto.

To deactivate **mpi**zone mode

1. Press the **mpi**zone **On/Off** button on the remote control.

   mpizone mode you set will be canceled and blue light will turn off.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 26 2010-11-11 14:41:56

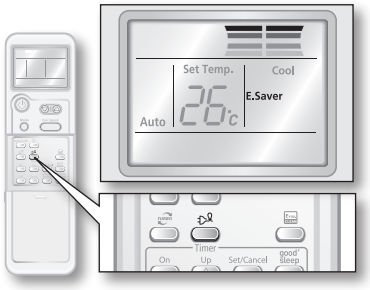
USING THE ENERGY SAVING FUNCTION

This function will set the temperature range limit to help you save energy while the air conditioner is operating in Cool mode.

1. Press the **Energy saving** button on the remote control while the air conditioner is operating in Cool mode.

   E.Saver indicator and air swing indicator appear automatically on the remote control display.
   The air flow blades move up and down.

   If the current set temperature is lower than 26℃, it will automatically raise to 26℃.



- Energy saving function is only available in Cool mode.
- When Energy saving function is activated, temperature range will be limited to 26℃~30℃.
- If the desired temperature is lower than 26℃, turn off the energy saving function by pressing the **Energy saving** button again.
- Temperature/Fan speed can also be adjusted.(See step 3~4 on page 15 for instructions.)
- Air flow can be adjusted manually.(See page 19 for instructions.)

To deactivate the Energy saving function

1. Press the **Energy saving** button on the remote control.

   Energy saving function you set will be canceled and Energy saving indicator will disappear on the remote control display.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 27 2010-11-11 14:41:58

using advanced functions

USING THE EVAPORATOR CLEAN FUNCTION

Evaporator clean function will prevent from growing mold by eliminating the moisture inside of the indoor unit. Your indoor unit evaporates the moisture inside of the unit. Activate this function to provide you with more clean and healthier air.

1. Press the **Evap. CLEAN** button.

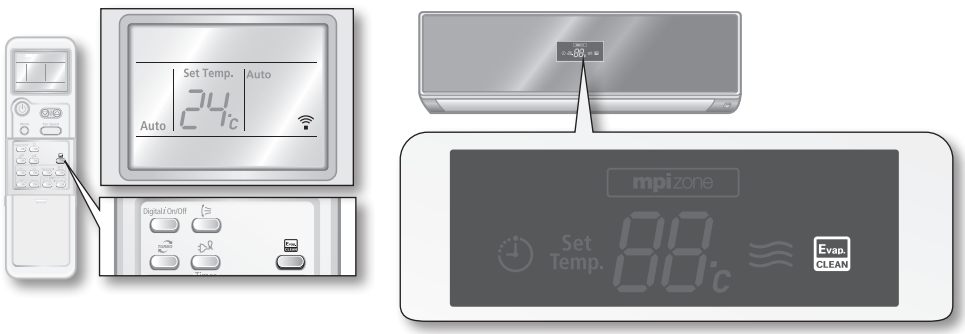
- ▶ When the air conditioner is turned off,
  The Evaporator clean indicator on the indoor unit display appears and the Evaporator cleaning function runs.
- ▶ When the air conditioner is turned on,
  The Evaporator clean indicator on the indoor unit display appears and the Evaporator cleaning function runs after stopping the air conditioner operation.

Evaporator Cleaning time can vary, depending on the previously used mode.

Auto(cool), Cool, Dry mode : approximately 30 minutes.

Auto(heat), Heat, Fan mode : approximately 15 minutes.

When the air conditioner is turned on, the Auto cleaning function runs after stopping the air conditioner operation.

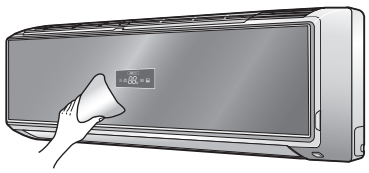


ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 28 2010-11-11 14:42:00

cleaning and maintaining the air conditioner

CLEANING THE EXTERIOR

1. Wipe the surface of the unit with a slightly wet or dry cloth when needed.



CAUTION Do not use Benzene, Thinner or Clorox™. They may damage the surface of the air conditioner and can create a risk of fire.

CLEANING THE FILTER

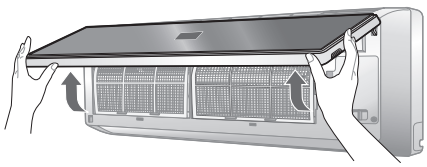
When cleaning the filter, make sure to unplug the power from the unit. No special tools are needed to clean it.

Air filter

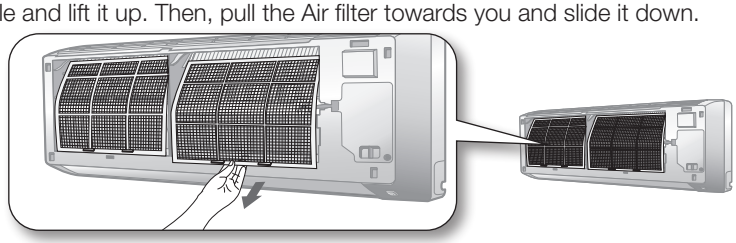
Washable foam based air filter captures large particles from the air. The filter is cleaned with a vacuum or by hand washing.

1. Open the front panel.

   Tightly grab the grooved surface on both side of the front panel and lift the bottom side of the panel up until it gets locked.

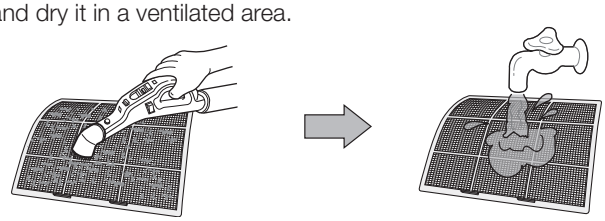


2. Grab the handle and lift it up. Then, pull the Air filter towards you and slide it down.



Front panel of your air conditioner is actually not detachable.

3. Clean the Air filter with a vacuum cleaner or soft brush. If dust is too heavy, then rinse it with running water and dry it in a ventilated area.



- For the best conditions, repeat every two weeks.
- If the Air filter dries in a confined(or humid) area, odors may generate. If it occurs, re-clean and dry it in a well-ventilated area.

4. Insert the Air filter back in its original position.
5. Close the front panel.

   Grab the side of the front panel tightly and push it downward.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 29 2010-11-11 14:42:01

cleaning and maintaining the air conditioner

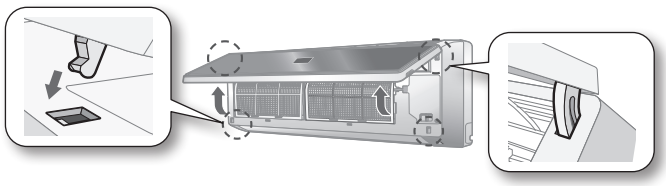
CLEANING THE FILTER

Anti-allergy filter

Washable foam based Anti-allergy filter leads to reduction in allergens that thrive in polluted air. The filter is cleaned with a vacuum or by hand washing.

1. Open the front panel.

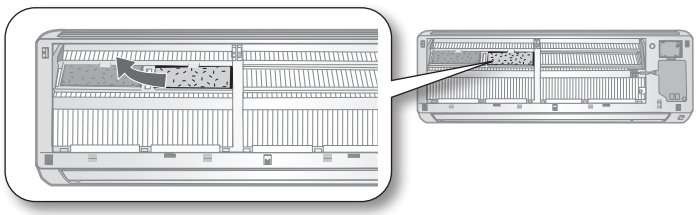
Tightly grab the grooved surface on both side of the front panel and lift the bottom side of the panel up until it gets locked.



2. Remove the Air filter.

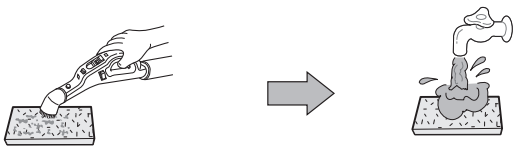
Grab the handle and lift it up. Then, pull the Air filter towards you and slide it down.

3. Slide the Anti-allergy filter(color in sky-blue) out to remove it from the slot.



- Anti-allergy filter can be placed in any 4 slots beneath the air filter.
- Front panel of your air conditioner is actually not detachable.

4. Clean the Anti-allergy filter with a vacuum cleaner or soft brush. Then rinse it with running water and dry it in a ventilated area.



5. Install the Anti-allergy filter back in position.

6. Close the front panel.

Grab the side of the front panel tightly and push it downward.

Clean the Anti-allergy filter every 3 months. The cleaning term may differ on usage and environmental conditions.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 30 2010-11-11 14:42:03

REPLACING THE FILTER

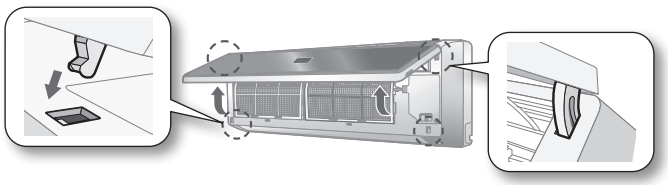
Replacement filter may be purchased from the retail store or ordered from the dealer where you purchased the unit. If you cannot find one, please call a contact center.

Deodorizing filter

Deodorizing filter absorbs efficiently cigarette smoke, pet odors and other unpleasant smells. Deodorizing filter cleaning is simple, just remove old filter and install a new one.

1. Open the front panel.

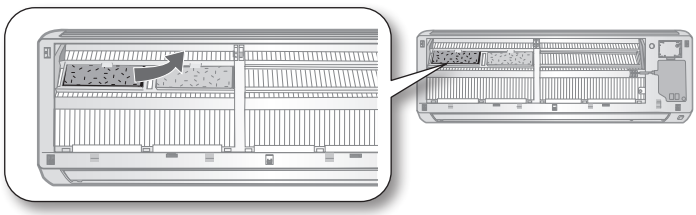
Tightly grab the grooved surface on both side of the front panel and lift the bottom side of the panel up until it gets locked.



2. Remove the Air filter.

Grab the handle and lift it up. Then, pull the Air filter towards you and slide it down.

3. Slide the Deodorizing filter(color in black) out to remove it from the slot.



- Deodorizing filter can be placed in any 4 slots beneath the air filter.
- Front panel of your air conditioner is actually not detachable.

4. Install the new Deodorizing filter back in position.

5. Close the front panel.

Grab the side of the front panel tightly and push it downward.

- The replacement timing of the Deodorizing filter differs depending on usage and environmental conditions.
- Even if Deodorizing and Anti-allergy filters are installed in an inverted position, it will not affect its filtration system.

ENGLISH

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 31 2010-11-11 14:42:03

cleaning and maintaining the air conditioner

MAINTAINING YOUR AIR CONDITIONER

If the air conditioner will not be used for an extended period of time, dry the air conditioner to maintain it in best condition.

1. Dry the air conditioner thoroughly by operating in Fan mode for 3 to 4 hours and disconnect the power plug. There may be internal damage if moisture is left in components.
2. Before using the air conditioner again, dry the inner components of the air conditioner again by running in Fan mode for 3 to 4 hours. This helps remove odors which may have generated from dampness.

Periodical checks

Refer to the following chart to maintain the air conditioner properly.

Type	Description	Monthly	Every 4 months	Once a year
Indoor unit	Clean the air filter (1)	●		
	Clean the condensate drain pan (2)			●
	Thoroughly clean the heat exchanger (2)			●
	Clean the condensate drain pipe (2)		●	
	Replace the remote control batteries (1)			●
Outdoor unit	Clean the heat exchanger on the outside of the unit (2)		●	
	Clean the heat exchanger on the inside of the unit (2)			●
	Clean the electric components with jets of air (2)			●
	Verify that all the electric components are firmly tightened (2)			●
	Clean the fan (2)			●
	Verify that all the fan assembly is firmly tightened (2)			●
	Clean the condensate drain pan (2)			●

The checks and maintenance operations described are essential to guarantee the efficiency of the air conditioner. The frequency of these operations varies according to the characteristics of the area, the amount of dust, etc.

(1) The described operations should be performed more frequently if the area of installation is very dusty.

(2) These operations must always be performed by qualified personnel. For more detailed information, see the Installation Manual.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 32 2010-11-11 14:42:03

Internal protections via the unit control system

This internal protection operates if an internal fault occurs in the air conditioner.

Type	Description
Against cold air	The internal fan will be off to against cold air when the heat pump is heating.
De-ice cycle	The internal fan will be off to against cold air when the heat pump is heating.
Anti-protection of internal battery	The compressor will be off to protect internal battery when the air conditioner operates in Cool mode.
Protect compressor	The air conditioner does not start operating immediately to protect the compressor of the outdoor unit after it has been started.

If the heat pump is operating in Heat mode, De-ice cycle is actuated to remove frost from an outdoor unit that may have deposited at low temperatures.

The internal fan is switched off automatically and restarted only after the de-ice cycle is completed.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 33 2010-11-11 14:42:04

appendix

TROUBLESHOOTING

Refer to the following chart if the air conditioner operates abnormally. This may save time and unnecessary expenses.

PROBLEM	SOLUTION
The air conditioner does not operate immediately after it has been restarted.	• Because of the protective mechanism, the appliance does not start operating immediately to keep the unit from overloading. The air conditioner will start in 3 minutes.
The air conditioner does not work at all.	• Check that the power plug is properly connected. Insert the power plug into the wall socket correctly. • Check if the circuit breaker is switched off. • Check if there is a power failure. • Check your fuse. Make sure it is not blown out.
The temperature does not change.	• Check if you selected Fan mode. Press the **Mode** button on the remote control to select another mode.
The cool(warm) air does not come out of the air conditioner.	• Check if the set temperature is higher(lower) than the current temperature. Press the **Temperature** ▼ or ▲ button on the remote control to change the set temperature. Press the **Temperature** ▼ or ▲ button to decrease or increase the temperature. • Check if the air filter is blocked by dirt. Clean the Air filter every two weeks. • Check if the air conditioner has just been turned on. If so, wait 3 minutes.
The fan speed does not change.	• Check if you selected Auto or Dry mode. The air conditioner automatically adjusts the fan speed to Auto in Auto/Dry mode.
Timer function does not set.	• Check if you press the **Set/Cancel** button on the remote control after you have set the time.
Odors permeate in the room during operation.	• Check if the appliance is running in a smoky area or if there is a smell entering from outside. Operate the air conditioner in Fan mode or open the windows to air out the room.
The air conditioner makes a bubbling sound.	• A bubbling sound may be heard when the refrigerant is circulating through the compressor. Let the air conditioner operate in a selected mode.
Water is dripping from the air flow blades.	• Check if the air conditioner has been cooling for an extended period of time with the air flow blades pointed downwards. Condensation may generate due to the difference in temperature.
Remote control is not working.	• Check if your batteries are depleted. • Make sure batteries are correctly installed. • Make sure nothing is blocking your remote control sensor. • Check that there are strong lighting apparatus near the air conditioner. Strong light which comes from fluorescent bulbs or neon signs may interrupt the electric waves.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 34 2010-11-11 14:42:04

OPERATION RANGES

The table below indicates the temperature and humidity ranges the air conditioner can be operated within. Refer to the table for efficient use.

MODE	OPERATIONAL TEMPERATURE		INDOOR HUMIDITY	IF OUT OF CONDITIONS
	INDOOR	OUTDOOR		
COOLING	18℃ to 32℃	-5℃ to 43℃	80% or less	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor.
HEATING	27℃ or less	-20℃ to 24℃	-	Internal protection triggers and the air conditioner will stop.
DRYING	18℃ to 32℃	-5℃ to 43℃	-	Condensation may occur on the indoor unit with risk to have either water blow off or drops on the floor.

The standardized temperature for heating is 7℃. If the outdoor temperature drops to 0℃ or below, the heating capacity can be reduced depending on the temperature condition.
If the cooling operation is used at over 32℃(indoor temperature), it does not cool at its full capacity.

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 35 2010-11-11 14:42:04

QUESTIONS OR COMMENTS?

COUNTRY	CALL	OR VISIT US ONLINE AT
ARGENTINE	0800-333-3733	www.samsung.com
BRAZIL	0800-124-421 4004-0000	www.samsung.com
CHILE	800-SAMSUNG (726-7864)	www.samsung.com
NICARAGUA	00-1800-5077267	www.samsung.com
HONDURAS	800-7919267	www.samsung.com
COSTA RICA	0-800-507-7267	www.samsung.com
ECUADOR	1-800-10-7267	www.samsung.com
EL SALVADOR	800-6225	www.samsung.com
GUATEMALA	1-800-299-0013	www.samsung.com
JAMAICA	1-800-234-7267	www.samsung.com
PANAMA	800-7267	www.samsung.com
PUERTO RICO	1-800-682-3180	www.samsung.com
DOMINICA	1-800-751-2676	www.samsung.com
TRINIDAD & TOBAGO	1-800-SAMSUNG (726-7864)	www.samsung.com
PERU	0-800-777-08	www.samsung.com
VENEZUELA	0-800-100-5303	www.samsung.com
COLOMBIA	01-8000112112	www.samsung.com

Wall Mounted Type Series

Vivace : ND✳✳✳V✳✳✳✳

Air Conditioner

user manual

imagine the possibilities

Thank you for purchasing this Samsung product.
To receive more complete service, please register your product at

www.samsung.com/register

SAMSUNG

ⒺⓈⒻ DB98-31763A-1

ND□□□V□□□□_IB_E_31763-1_10.11.11.indd 37 2010-11-11 14:42:04